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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHARLES LEE ASPLIN

Appeal 2010-002521
Application 09/687,445
Technology Center 3600

Before: LINDA E. HORNER, PHILLIP J. KAUFFMAN, and WILLIAM V. SAINDON, *Administrative Patent Judges*.

KAUFFMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellant appeals under 35 U.S.C. § 134 from a rejection of claims 12-29. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

THE INVENTION

Appellant's claimed invention "relates to a method of leveling an existing concrete slab which has had portions settle into the ground so as to become uneven over time." Spec. 1:13-15. Claims 12, 17, 22, and 25 are independent. Claim 12, reproduced below, is representative of the claimed subject matter:

> 12. A method of lifting and leveling a slab by using compressed air to lift said slab and dried sand to stabilize and hold said slab in a desired position said method comprising the steps of:
>
> supplying a sand storage tank filled with a well dried mason's sand said storage tank having a sand outlet;
>
> supplying a compressed air source in fluid tight connection with said sand outlet;
>
> mixing said sand and said compressed air in a mixing chamber;
>
> delivering said sand and air mixture to an injector gun via an elongate fluid tight hose said gun further having a gun nozzle;
>
> drilling a hole in said slab to be leveled;
>
> attaching said gun nozzle to said drilled hole;
>
> operating said injector gun in bursts so as to provide compressed air and sand;
>
> lifting with air pressure, momentarily, said slab to a height above the desired final level with the compressed air supplied by said bursts, such that a settle cavity filled with compressed air sufficient to raise said slab above the ground is created between said slab and said ground until said

compressed air escapes from said settle cavity allowing said slab to drop back in contact with said ground such that said slab is supported by said ground and said sand;

leveling said ground with said well dried mason's sand carried by said compressed air in said burst such that said well dried mason's sand may move freely within said settle cavity momentarily created by said compressed air; and

repeating said lifting and leveling steps until said slab is at the desired level and resting upon said well dried mason's sand.

REJECTIONS

Appellant seeks review of the following rejections:

1. Claims 12-18, 22, and 24-29 under 35 U.S.C. § 103(a) as unpatentable over Fiock[1] (US 1,943,914; iss. Jan. 16, 1934), Asplin '763 (US 5,860,763; iss. Jan. 19, 1999) and Lightle (US 5,795,108; iss. Aug. 18, 1998).

2. Claims 19-21 and 23 under 35 U.S.C. § 103(a) as unpatentable over Fiock, Asplin '763, Lightle, and Poulter (US 1,915,032; iss. Jun. 20, 1933).[2]

3. Claims 12, 17, 18, and 25-29 under 35 U.S.C. § 103(a) as unpatentable over Fiock, and Asplin '914 (US 5,561,914; iss. Oct. 8, 1996).

4. Claims 19-24 under 35 U.S.C. § 103(a) as unpatentable over Fiock, Asplin '914, and Poulter.

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[1] Though the Answer and the Appeal Brief refer to this reference as Flock, the correct name of this reference appears to be Fiock.

[2] Claim 18 is mistakenly listed as subject to this ground of rejection in the Office Action that is the subject of this appeal, but this is corrected in the Answer. Office Action dated March 17, 2009 at 5; Ans. 2, 6.

OPINION

Claims 12-18, 22, and 24-29 as unpatentable over Fiock, Asplin '763, and Lightle

Independent claims 12, 17, and 22

Independent claim 12 is directed to a method of lifting and leveling a slab that includes the step of momentarily lifting the slab with air pressure to a height above the desired fill level such that a settle cavity is created (a cavity filled with compressed air sufficient to raise the slab above the ground). Similarly, claim 17 is directed to a method of lifting and leveling a slab that includes the step of momentarily lifting the slab with air pressure to a height above the desired final level such that a settle cavity is created. Claim 22 is directed to a method of lifting and leveling a slab that includes the step of introducing compressed air and sand underneath the slab so that the compressed air of the mixture raises the slab upward to form a cavity between the slab and the ground. Consequently, independent claims 12, 17, and 22 each call for momentarily lifting the slab with air pressure.

The Examiner found that although Fiock does not explicitly disclose the use of compressed air for lifting and leveling a slab of concrete, Fiock's disclosure of the use of compressed air to run a tamper demonstrates that Fiock contemplated the use of compressed air as a method of "otherwise forcing" a sufficient quantity of loose material to raise a damaged slab.[3] Ans. 3, 10 (citing Fiock, col. 1, ll. 22-26; col. 2, ll. 19-33[4]; col. 4, ll.87-95[5]).

[3] The Examiner relied on Asplin '763 to disclose using well dried mason's sand to fill a cavity below a sunken pavement slab, and relied on Lightle to disclose a high volume compressed air source and a pressure relief valve. Ans. 5-6. The Examiner does not rely on Asplin '763 or Lightle to disclose using pressurized air to momentarily lift a slab.

[4] The Examiner appears to refer to Fiock page 2 (not column 2), lines 19-33.

[5] The Examiner appears to refer to page 2 (not column 4), lines 87-95.

Fiock discloses a first apparatus for lifting a sagging structure (e.g. a slab) by "pumping, tamping or otherwise forcing a sufficient quantity of loose or plastic material under the sagging structure." Fiock, 1, ll. 1-5, 22-26; figs. 1-3. Fiock does not explicitly disclose that "otherwise forcing" includes the use of pressurized air.

Fiock also discloses a second apparatus for forcing or tamping filling material beneath a sunken pavement that has already been raised. Fiock, 2, ll. 45-49; fig. 4. This apparatus includes a plunger 31, that rams material 12 into the earth beneath the pavement, and this plunger 31 may be powered by compressed air. Fiock, 2, ll. 68-94; fig. 4. Fiock does not disclose that the filling material can include compressed air.

We fail to see how use of compressed air to power the plunger of Fiock's second apparatus that forces filling material that is not mixed with compressed air beneath a previously raised slab, demonstrates that "otherwise forcing," as disclosed in Fiock's first apparatus, contemplated the use of compressed air in the filling material to raise a slab. *Contra* Ans. 10.

We agree with Appellant that Fiock does not disclose using compressed air to lift a slab as called for in independent claims 12, 17, and 22. Br. 11, 14, 16. Consequently, we do not sustain the rejection of independent claims 12, 17, and 22, and their dependent claims 13-16, 18, and 24.

Independent claim 25

Claim 25 is directed to a method of lifting and leveling a slab that includes the step of introducing pressurized fluid media underneath the slab so that the pressurized fluid media lifts the slab upward to form a cavity under the slab, and introducing dried material different from the pressurized media into the cavity to at least partially fill the cavity.

Fiock discloses using a single media filling material to lift the slab (sagging structure). Fiock, 2, ll. 11-17; fig. 1. Given this, we agree with Appellant that Fiock "does not introduce a dried material different from the pressurized media into the cavity to at least partially fill the cavity." Br. 18. Thus, we do not sustain the rejection of independent claim 25 and its dependent claims 26-29.

Claims 19-21 and 23 as unpatentable over Fiock, Asplin '763, Lightle, and Poulter

Claims 19-21 depend from independent claim 17, and claim 23 depends from independent claim 22. The rejection of claims 19-21 and 23 relies upon the same erroneous finding that Fiock discloses using compressed air to lift a slab as relied on in the rejection of claims 17 and 22. The Examiner does not rely upon the remaining references to alter this finding. Accordingly, we cannot sustain the rejection of claims 19-21 and 23.

Claims 12, 17, 18, and 25-29 as unpatentable over Fiock and Asplin '914; and claims 19-24 as unpatentable over Fiock, Asplin '914, and Poulter

Independent claims 12, 17, 22, and 25 are each directed to a method of lifting and leveling a slab.

The rejections of independent claims 12, 17, 22, and 25 over Fiock, and Asplin '914, or over Fiock, Asplin '914, and Poulter each rely upon the Examiner's conclusion that it would have been obvious "to provide the method of raising and leveling a sunken concrete slab of Fiock, with the step of providing masonry sand, under high air pressure, as taught by Asplin, since both references teach ejecting earthen, filler materials under pressure, in the construction industry." Ans. 8.

Asplin '914 discloses that:

> Dry sand is a frequent requirement in various aspects of the construction industry. One use for dry sand is in the mixing of certain dry premix mortars and cements. A second use for dry sand is the use of sand blasters wherein dry sand is mixed with air at high pressure and used for a variety of situations such as the removal of paint or rust from metals.

Asplin '914, col. 1, ll. 12-17.

Appellant argues, and we agree, that Asplin '914 does not contain any disclosure regarding raising and leveling slabs. *See* Br. 22. The knowledge that dry sand may be used in the mixing of mortars and cement, or may be used for sand blasting, would not, in itself, lead a person of ordinary skill in the art to modify Fiock's method of lifting a slab to include the use of compressed air. The Examiner did not articulate adequate reasoning based on a rational underpinning to explain why a person of ordinary skill in the art would have been led to combine the references to reach the claimed subject matter. We cannot sustain the rejection of independent claims 12, 17, 22, and 25, or their respective dependent claims 18-21, 23, 24, and 26-29.

DECISION

We reverse the Examiner's decision to reject 12-29.

REVERSED

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